

IN THE CLAIMS:

Claims 5 and 26 have been amended herein. Claim 18 has been canceled. Claims 5-7 and 26 are currently under consideration. Claims 27-29 have been added. All of the pending claims are presented below. This listing of claims replaces all prior versions and listings of claims in the application. Please enter these claims as amended.

Listing of Claims:

1. (Withdrawn) An isolated or recombinant phosphorylated Apoptin or functional equivalent and/or functional fragment thereof.
2. (Withdrawn) The isolated or recombinant phosphorylated Apoptin of claim 1 or functional equivalent and/or functional fragment thereof wherein said Apoptin is tumor-specifically phosphorylated.
3. (Withdrawn) The isolated or recombinant phosphorylated Apoptin of claim 2 or functional equivalent and/or functional fragment thereof wherein said isolated or recombinant phosphorylated Apoptin is phosphorylated on a threonine residue of Apoptin, which threonine residue, in the Apoptin of FIG. 1(SEQ ID NO:1), is located between amino acid 100 and amino acid 121 of SEQ ID NO:1.
4. (Withdrawn) The isolated or recombinant phosphorylated Apoptin of claim 3 or functional equivalent and/or functional fragment thereof, wherein said isolated or recombinant phosphorylated Apoptin is phosphorylated on a threonine residue, which threonine residue, in the Apoptin of FIG. 1(SEQ ID NO:1), resides at amino acid position 106 and/or 107 and/or 108 of SEQ ID NO:1.

5. (Currently amended) A vector comprising a nucleic acid encoding ~~a mimic of phosphorylated-Apoptin~~ or a functional fragment thereof, wherein said ~~phosphorylated-Apoptin~~ is provided with a mutation that mimics constitutive phosphorylation ~~phosphorylated~~ on a threonine residue and wherein said threonine residue, in the Apoptin of FIG. 1 (SEQ ID NO: 1), resides at amino acid position 108.

6. (Original) A gene delivery vehicle comprising the vector of claim 5.

7. (Previously presented) A host cell comprising the vector of claim 5.

8. (Withdrawn) An isolated or synthetic antibody or functional equivalent and/or functional fragment thereof specifically recognizing the phosphorylated Apoptin of claim 1.

9. (Withdrawn) An immunoassay comprising the antibody of claim 8.

10. (Withdrawn) A nucleic acid encoding the antibody of claim 8.

11. (Withdrawn) A vector comprising the nucleic acid of claim 10.

12. (Withdrawn) A host cell comprising the nucleic acid of claim 11.

13. (Canceled).

14. (Withdrawn) A method for detecting the presence of cancer cells or cells that are cancer prone in a sample of cells, said method comprising:

providing a cell lysate of cells from said sample of cells with Apoptin or a functional equivalent and/or functional fragment thereof which Apoptin or a functional equivalent and/or functional fragment thereof can be phosphorylated, and

determining phosphorylation state of said Apoptin or a functional equivalent and/or functional fragment thereof.

15. (Withdrawn) A method for identifying a putative cancer-inducing agent, said method comprising:

submitting a sample of cells to said putative cancer-inducing agent, and

detecting the presence of cancer cells or cells that are cancer prone in a sample of cells by providing a cell lysate of cells from said sample of cells with Apoptin or a functional equivalent and/or functional fragment thereof which Apoptin or a functional equivalent and/or functional fragment thereof can be phosphorylated, and determining the phosphorylation state of said Apoptin or a functional equivalent and/or functional fragment thereof.

16. (Withdrawn) A method for testing an *in vitro* treatment effect of Apoptin on tumor cells, said method comprising:

providing a cell lysate of tumor cells with Apoptin or functional equivalent and/or functional fragment thereof which can be phosphorylated; and

determining phosphorylation state of said Apoptin.

17. (Withdrawn) The method according to claim 14 wherein said Apoptin further comprises a fusion protein.

18.-19. (Canceled).

20. (Withdrawn) A pharmaceutical composition comprising:
the phosphorylated Apoptin of claim 2.

21. (Withdrawn) The pharmaceutical of claim 20 for the induction of apoptosis.

22. (Withdrawn) The pharmaceutical of claim 21 wherein said apoptosis is p53-independent.

23. (Withdrawn) The pharmaceutical composition of claim 22 for the treatment of a disease wherein enhanced cell proliferation or decreased cell death is observed.

24. (Withdrawn) The pharmaceutical composition of claim 23 wherein said disease comprises cancer or auto-immune disease.

25. (Withdrawn) A method for treating a subject having a disease wherein enhanced cell proliferation or decreased cell death is observed, said method comprising:
treating said subject with the pharmaceutical composition of claim 20.

26. (Currently Amended) A vector comprising a nucleic acid encoding Apoptin of SEQ ID NO:1, ~~a functional equivalent or a functional fragment thereof,~~ wherein ~~the functional equivalent~~ said Apoptin comprises replacement of at least one threonine residue located at amino acid position 106, 107, or 108 of SEQ ID NO:1 with a glutamic acid to mimic constitutive phosphorylation.

27. (New) A gene delivery vehicle comprising the vector of claim 26.

28. (New) A host cell comprising the vector of claim 26.

29. (New) A vector comprising a nucleic acid encoding a protein comprising SEQ ID NO:1 with a mutation of amino acid position 108 that mimics constitutive phosphorylation of a threonine residue.